ATTACHMENT J1

Wright-Patterson AFB Electric Distribution System

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J1.1 Wright-Patterson AFB Overview

Wright-Patterson Air Force Base (WPAFB) is located in Montgomery and Greene Counties, in the northeast portion of the Greater Dayton, Ohio area. The communities of Dayton, Riverside, Fairborn, and Huber Heights border this Base, which encompasses 7,198 acres plus 431 acres of easement or permits for a total of 8,145 acres of land. WPAFB is also an integral part in the multi-county region (Miami, Montgomery, Greene, and Clark Counties), serves as the largest single-site employer in the region, and provides employment and economic benefits to an area of nearly one million people.

J1.1.1 Installation History

The history of WPAFB begins with, and is still closely related to the legacy of Wilbur and Orville Wright. The Wright Brothers' early aviation accomplishments occurred at Huffman Prairie Flying Field, which is located off of the end of Runway 23, and is marked to commemorate their flying achievements. Today the influence of the Wright Brothers remains evident, as WPAFB is still a strong leader in both military aviation research and development.

Aviation research and development began to occur during the World War I era. In 1917, Wilbur Wright Field was established as a pilot training school, and McCook Field (near the intersection of State Route 4 and Interstate 75) was established as an air service engineer center. Following World War I, McCook Field outgrew its facilities and required a more permanent home. In 1924 the City of Dayton donated over 4,500 acres of land for the construction of an aerodrome and new research facilities. This area makes up much of what is WPAFB today.

During World War I, WPAFB began its involvement in the field of logistics. This occurred with the establishment of the Fairfield Aviation General Supply Depot, which was located adjacent to Wilbur Wright Field. The depot became known as the Fairfield Air Depot, and served as a major Army Air Corps depot through the end of World War II. Central control for the entire Air Force depot system evolved at WPAFB, forming today's modern logistics network.

In 1931, Wilbur Wright Field, Fairfield Air Depot, and Huffman Prairie were renamed Patterson Field, in honor of Lt. Frank Stuart Patterson, who died while flight testing machine gun synchronization technology. The fields were officially merged and were permanently designated as Wright-Patterson AFB on 13 January 1948. At that time the 2750th Air Base Wing assumed the host organization duties for the Base.

The 2750th remained the host organization until 1992, when the Aeronautical System Center assumed the host duties. The 2750th was redesignated as the 645th Air Base Wing then redesignated again in 1994 as the 88th Air Base Wing (88 ABW).

Today, WPAFB serves as the site for the conception, testing, modification, and re-testing of weapon systems. Using this technology, the Base has assured the Air Force "that it will continue to be the most responsive deterrent force in the history of aviation."

J1.1.2 Physical Assets

Facilities at the Base encompass a runway, associated taxiways and parking aprons, administrative areas, industrial facilities, testing/developmental laboratories, dormitories, hospital, housing areas, recreational facilities, and open space. The overall land/facility profile of WPAFB AFB is shown in the following table.

Installation Assets	
Land Area (fee-owned)	7,198 Acres
Easements/ROWs	431 Acres
Buildings	850; 16,090,677 SF
Military Family Housing	2,249 Units; 3,839,212 SF

WPAFB is comprised of several geographic areas, generally referred to as Areas A, B, and C. The smallest of the three main areas is Area A. This area runs along the north side of Highway 444 between Gates 16A and 9A. It includes the hospital, headquarters complex, and three housing areas (Brick Quarters, Pine Estates, and Green Acres). Area B is the area on the south side of Highway 444, formerly known as Wright Field. It includes the Air Force Museum and the Prairies and Woods housing areas. Area C is by far the largest area and was formerly known as Patterson Field. It includes the active airfield and most of the Base facilities and flying activities. Area C also includes two sub-areas: Kitty Hawk Center and the West Ramp. Kitty Hawk Center is a small triangular plot east of Highway 444 and just south of the City of Fairborn that contains the community support complex and a high temperature hot water (HTHW) plant. The West Ramp area is on the northwest side of Area C and includes all facilities on the northwest side of the main runway.

WPAFB is all fee-owned, including two GSUs. There have been approximately 85 fee acquisition transactions (20 for Areas A and C and 65 for Area B) over the last 80 years ranging in size from a fraction of an acre to over 4500 acres.

For the utility systems, the AF has been granted many easements and rights-of-way (ROW), some by Government agencies, some by private entities.

J1.1.3 Mission, Organization, and Associate Units

The U.S. Air Force (USAF) mission is continually evolving at WPAFB as research continues towards "faster, higher, farther, and safer" flight. Missions at the Base include acquisition, logistics management, research and development, education, flight operations and many other activities that prove to play a crucial role in the nation's defense.

- The Aeronautical System Center (ASC) is the host organization at WPAFB. The organization is comprised of the Acquisition Force, the 74th Medical Group, and the 88th Air Base Wing. Together these units create the "Aerospace Research and Acquisition Center of Choice, the Birthplace, Home, and Future of Aerospace." The primary mission

of ASC is systems acquisition, which is accomplished through the development and acquisition of state-of-the-art combat-ready aeronautical weapons and related support systems for USAF operation commands. Every fighter, bomber, cargo, and trainer aircraft in the USAF inventory were developed at ASC, as well as all but one reconnaissance aircraft. The ASC also maintains the vision, "to lead the world in the development of flight; to advance the air and space dream; and to support the vision, mission, goals, and objectives of the USAF."

- There are several missions managed by ASC's Acquisition Force, Air Base Wing, and Medical Group. The primary missions and responsibilities of these groups include streamlining the acquisition process while strengthening strategic and conventional forces, expanding airlift capabilities, and modernizing and expanding the combat forces. The Acquisition Force manages the development and acquisition of aeronautical systems, and oversees complex strategic and tactical programs. The Air Base Wing is responsible for operations, and supports activities serving all ASC organizations and associate units. The Wing manages over 8,000 acres of land and approximately 1,600 facilities. The Medical Group offers comprehensive health and dental care in more than 52 specialties for active duty and retired military personnel, and their families. The WPAFB Medical Group is also recognized for operating the second largest medical facility in the USAF.

Over 60 associate units are currently housed at WPAFB. These organizations represent a variety of critical Department of Defense (DOD) activities. The following is a summary of major associate organizations that reside at WPAFB and their primary responsibilities.

- The Air Force Material Command (AFMC) is headquartered at WPAFB and has been associated with WPAFB since 1917. The command serves as the organization responsible for the management of weapon systems. Their mission involves building and sustaining military systems throughout their service life. This is accomplished through the management of research, development, testing, acquisition, and support of all Air Force weapon systems.

- The United States Air Force Museum (AFM) located at WPAFB is the world's largest and oldest military aviation museum, and is host to nearly one million visitors from the world on an annual basis. The AFM operates with the primary mission and goal of preserving the history of military aviation, and has been in operation since 1923.

- HQ National Air Intelligence Center (NAIC) constitutes the primary DOD agency for production of foreign aerospace intelligence. The center is responsible for assessing current and projected foreign aerospace capabilities, developing mission-planning intelligence materials, and evaluating technologies of potential adversaries. The NAIC mission involves utilizing these responsibilities to provide national decision makers accurate and timely technical information on the capabilities and potential threats of foreign powers to ensure U.S. air superiority.

- The Air Force Research Laboratory (AFRL) is responsible for leading the discovery, development, and transition of aeronautical technologies. The AFRL is comprised of seven major Directorates with functional responsibilities in advanced technology development. Five of the seven research directorates are located at Wright Field.

- The Air Force Institute of Technology (AFIT) offers accredited graduate and professional continuing education programs to AF personnel. The AFIT operates under the mission of keeping the Air Force on the leading edge of aerospace technology and management, through specialized education, basic research, and consultation.
- The 445th Airlift Wing of the USAF Reserve Command are stationed at WPAFB and fly C-141B Starlifter aircraft. The 445th has the mission of attaining and maintaining operational readiness; providing strategic transport of personnel and equipment; providing aeromedical evacuation; and recruiting and training towards these goals. The wing is comprised of four attached groups, and if ever required to mobilize, is part of the Air Mobility Command from Scott Air Force Base, Illinois. This group has resided at WPAFB since October 1994.
- DISAM is the DOD Defense Institute of Security Assistance Management. They are responsible for education and training for personnel involved in security assistance management.
- AFSAC is the Air Force Security Assistance Center. This center is responsible for the management of foreign military sales cases and contracts.
- The 55th Wing is a component of Air Combat Command and supports the National Airborne Operations Center. This involves providing modern, highly survivable, command, control, and communications capabilities for directing U.S. Forces.
- The Defense Information Systems Agency (DISA) missions at WPAFB are to provide the Air Force new business proposals, marketing requirements for their agency, and standard executive software for large computer mainframe requirements. The Defense Enterprise Computing Center Detachment Dayton provides computer operations.
- The Materiel Systems Group's (MSG) mission is to provide combat support information to the warfighter. MSG focuses on providing value to the customer and supports the Air Force implementation of the Aerospace Expeditionary Forces. MSG is headquartered at WPAFB with operating locations at Tinker AFB, Oklahoma and Hill AFB, Utah.

J1.1.4 Population

WPAFB employs over 20,000 persons and is considered the largest single-location employer in the State of Ohio and one of the largest employers among AF Bases worldwide. The following table breaks down the WPAFB population:

Category	Population
Active Duty U.S. Military	5,531
Appropriated Fund Civilians	11,705
Non-Appropriated Fund Civilians	1,003
Non-extended Active Duty ANG/Reserve	2,060
Total – Base Employees	**20,299**
Active Duty Dependents	11,856

Contract Employees (estimated)	12,000
Total	**44,155**

J1.1.5 Housing

There are 2,249 permanent housing units totaling 3,839,212 square feet of living space, located in distinct housing developments around the Base. These units can be divided into the following categories:

- **Brick Quarters –** These were the first housing units constructed at WPAFB and are part of a Historic District. They consist of 91 military family housing units built between 1933 – 1935 and an additional 10 units constructed in 1970. The Foulois house (88 Wright Avenue) lies with this area. Utility mains excluded from the housing privatization (HP) initiative will be included in the utilities privatization (UP) package.
- **Prairies Family Housing –** Consists of 1,382 Wherry housing units constructed in the 1950s. This area is being renovated and expanded as a housing privatization initiative. The HP package includes service laterals, while the Government has retained the utility mains and will include those mains in the UP package.
- **Woods Housing –** Constructed in the 1970s, there are 350 units located in Woodland Hills. This housing complex has been privatized except for the utility mains that will be included in this UP package.
- **Green Acres/Pine Estates –** Consist of 416 units built in 1973. A HP initiative is underway. As with the other housing areas, utility mains will be excluded from HP and included in the UP package.

J1.1.6 Geographically Separated Units

Geographically separated units (GSUs) are summarized below:

- **Huffman Radar Site:** located approximately ¼ mile off the south side of Area C on Huffman Road.
- **Kauffman Avenue 69KV Switching Station**: situated sort of between Areas A and B located just across Highway 444/Kauffman Avenue from Area A and approximately ¼ mile from the southeast end of Area A.

J1.2 Electric Distribution System Description

J1.2.1 Electric Distribution System Fixed Equipment Inventory

The Wright-Patterson AFB electric distribution system consists of all appurtenances physically connected to the distribution system from the point where the distribution system enters the Installation and Government ownership currently starts to the points of demarcation, defined by the Right of Way. The system includes, but is not limited to, transformers, circuits, protective devices, utility poles, duct banks, switches, and other ancillary fixed equipment. The actual inventory of items sold will be in the bill of sale at the

time the system is transferred. The following description and inventory is included to provide the prospective new owner with a general understanding of the size and configuration of the distribution system. The Government makes no representation that the inventory is accurate. The Contractor shall base its proposal on site inspections, information in the technical library, other pertinent information, and to a lesser degree the following description and inventory. Under no circumstances shall the Contractor be entitled to any service charge adjustments based on the accuracy of the following description and inventory.

Specifically excluded from the electric distribution system privatization:

- The airfield lighting system;
- Street lighting;
- Parking lot and area/security floodlights mounted on buildings and/or fed from internal building circuitry and controls;
- Sports fields, track, and pedestrian pathway lighting;
- Water tower beacon lights and traffic signals;
- Military Family Housing electrical system service drops (included in the separate ongoing Housing Privatization initiative); and
- Generators (unless specifically included as part of another utility package).

J1.2.1.1 Description

Dayton Power and Light Company (DP&L) supplies electricity to Wright-Patterson AFB through two 69 kilovolt (kV) overhead feeds that enter the Base at the 444 Switch Station (sometimes referred to as the Kauffman Avenue Switching Station), and through one backup 69 kV feed that enters the Base at Substation J. Three 69 kV high-voltage transmission lines emanate from Switch Station 444 to feed six substations in Area B and two Substations in Areas A and C. These interconnected substations step down the voltage from 69 kV to either 13.8 kV, 12.47 kV, or 6.9 kV and supply the electrical distribution system throughout the base.

The Air Force owns the switching station and all facilities downstream of the DP&L incoming feeders. Three 69 kV transmission lines exit switching station 444 to serve the Base distribution substations. Two feeders are routed on 69 kV lattice steel towers to a dead-end tower in Area B, where the feeders make a transition to underground oil-filled power transmission cable to supply Substations A, B, C, D, E, and F. The third 69 kV feeder from Switching Station 444 crosses the highway and is routed overhead and underground to supply Substations H and J.

444 Switch Station is a low-profile, outdoor, air-insulated substation consisting of five 69 kV line terminations (two incoming DP&L-owned lines and three out-going Air Force-owned lines), four 69 kV gas circuit breakers, and two 69 kV buses configured in a sectionalized duplex bus arrangement. The transmission switching equipment provides control and overcurrent protection for three out-going, Air Force-owned, 69 kV transmission circuits.

Substation A consists of three 69 kV line terminations, five 69 kV gas circuit breakers, two 15/20/25 MVA 69-12.47 kV Load-Tap Changing (LTC) power transformers, and fifteen 15 kV metal-clad circuit breakers. It is a conventional, outdoor air-insulated distribution substation configured in a sectionalized duplex bus arrangement. This substation provides voltage regulation, control, and overcurrent protection for twelve 12.47 kV feeders.

Substation B will be rebuilt in 2004. The reconfigured substation will consist of two 69 kV line terminations, four 69 kV circuit breakers, one 30/40/50 MVA 69-13.8 kV LTC power transformer, one 15/20/25 MVA 67-6.9 kV LTC power transformer, and six 15 kV metal-clad circuit breakers. It is a conventional, outdoor air-insulated distribution substation configured in a single bus arrangement. This substation provides voltage regulation, control, and overcurrent protection for five 6.9 kV feeders and two 13.8 kV feeders.

Substation C consists of two 69 kV line terminations, six 69 kV gas circuit breakers, one 30/40/50 MVA 69-6.9 kV LTC power transformer, two 22/30/37 MVA 67-6.9 kV power transformers, one 15/2/25 MVA 69-12.47 kV LTC power transformer, and twenty-six 15 kV metal-clad circuit breakers. It is a conventional, outdoor air-insulated distribution substation configured in a sectionalized duplex bus arrangement. This substation provides voltage regulation, control, and overcurrent protection for twenty-three 12.47 kV feeders and twenty-three 6.9 kV feeders.

Substation D consists of three 69 kV line terminations, five 69 kV circuit breakers, one 15/20/25 MVA 69-12.47 kV LTC power transformer, one 16/22/28 MVA 69 – 12.47 kV LTC power transformer, and 28 15 kV metal-clad circuit breakers. It is a conventional, outdoor air-insulated distribution substation configured in a sectionalized duplex bus arrangement. This substation provides voltage regulation, control, and overcurrent protection for sixteen 12.47 kV feeders.

Substation E consists of one 69 kV line termination, one 69 kV gas circuit breaker, one 15/20/25 MVA 69 kV LTC power transformer, and fifteen 15 kV metal-clad circuit breakers. It is a conventional, outdoor air-insulated distribution substation configured in a single bus arrangement. This substation provides voltage regulation, control, and overcurrent protection for fifteen 6.9 kV feeders.

Substation F consists of one 69 kV line termination, one 15/20/25 MVA 69-12.47 kV LTC power transformer, and seven 15 kV metal-clad circuit breakers. It is a conventional, outdoor air-insulated distribution substation configured in a single bus arrangement. This substation provides voltage regulation, control, and overcurrent protection for six 12.47 kV feeders.

An expansion of Substation H will be completed in early 2004. The completed substation will consist of two 69 kV line terminations, three 69 kV gas circuit breakers, two 69 kV circuit switchers, two 15/20/25 MVA 69-12.47 kV LTC power transformers, and eleven 15 kV metal-clad circuit breakers. It is a conventional, outdoor air-insulated distribution substation configured in a sectionalized duplex bus arrangement. This substation provides voltage regulation, control, and overcurrent protection for seven 12.47 kV feeders.

Substation J consists of two 69 kV line terminations, five 69 kV gas circuit breakers, two 15/20/25 MVA 69-12.47 kV LTC power transformers, and eleven 15 kV metal-clad circuit breakers. It is a conventional, outdoor air-insulated distribution substation configured in a

sectionalized duplex bus arrangement. This substation provides voltage regulation, control, and overcurrent protection for eleven 12.47 kV feeders.

The substations are monitored and controlled through a Supervisory Control and Data Acquisition (SCADA) System consisting of a master control terminal (computer) located in Building 22 and nine Remote Terminal Units (RTU's), one in each substation. The master control terminal contains the system software and operator interface. The RTU's provide the system interface with the substation equipment. The RTU's and master control terminal communicate via telephone modems.

The primary distribution system consists of a total of 121 medium-voltage primary circuits. It is composed of overhead, pole-line construction (conventional, crossarm/pin insulator, open wire construction practices) with pole-mounted transformer banks, and underground construction (utilizing both duct-type and direct burial construction practices) with both outdoor pad-mounted transformers and indoor primary unit substations. It is estimated that 60 percent of the electrical ductbank in the Main Base area and 35 percent of the electrical ductbank in the Military Family Housing areas lie beneath 3-inch asphalt pavements.

The overhead primary system is principally composed of bare ACSR and copper conductors of various sizes, with #1/0 and #2 the most common. The underground primary system is principally composed of shielded copper conductors of various sizes, with #1/0, 250 kcmil, and 500 kcmil the most common. The majority of the distribution circuits are configured with loop tie switches to neighboring circuits. The pad-mounted transformers are principally conventional, dead-front and live-front units.

The Base maintenance staff reported that all polychlorinated biphenyl chemical (PCB) contaminated units have been replaced.

Electrical service in the already privatized Prairies family housing area is accomplished through lateral single-phase overhead primary feeders. Overhead to underground transitions have been made and pad-mounted transformers installed to provide service voltage to individual housing units. Electrical facilities in this area range in age from one to 30 years old.

The already privatized Woods MFH area has underground electrical circuits. Pad-mounted transformers and sectionalizing switches provide loop circuit capability. The electrical facilities in this area are about 10 to 20 years old. The Bricks Quarters and Green Acres family housing areas also have underground electrical circuits with pad-mounted transformers. The electrical facilities in these areas are approximately 15 to 35 years old and 10 to 35 years old, respectively.

The electrical facilities in the Pine Estates family housing area consist of both overhead and underground electrical circuits with pad-mounted transformers. The age of these components is approximately 35 years.

GSUs

Huffman Radar Site

Electrical service is provided to the off-Base Huffman Radar Site through a 12.47 kV distribution line with poles and a transformer extending from the DP&L meter near Star Route 4 for approximately one-half mile to the radar site.

J1.2.1.2 Inventory

Table 1 provides a general listing of the major electric distribution system fixed assets for the Wright-Patterson AFB electric distribution system included in the sale. A list of the existing utility meters for the electric system was provided by the Installation and was also used in the development of the inventory components.

TABLE 1
Fixed Inventory
Electric Distribution System – Wright-Patterson AFB

Component	Size	Unit	Quantity	Approximate Year of Construction
MAIN BASE				
Overhead Line				
Cable Aerial Copper	#1/0	SCLF	17,678	1963
Cable Aerial Copper	#1/0	SCLF	5,190	1965
Cable Aerial Copper	#1/0	SCLF	4,155	1967
Cable Aerial Copper	#1/0	SCLF	22,790	1968
Cable Aerial Copper	#1/0	SCLF	3,233	1970
Cable Aerial Copper	#2	SCLF	1,740	1963
Cable Aerial Copper	#2	SCLF	3,128	1965
Cable Aerial Copper	#2	SCLF	25,673	1967
Cable Aerial Copper	#2	SCLF	27,950	1970
Cable Aerial Copper	#2	SCLF	2,340	1972
Cable Aerial Copper	#2/0	SCLF	1,980	1967
Cable Aerial Copper	#2/0	SCLF	4,371	1968
Cable Aerial Copper	#2/0	SCLF	4,088	1970
Cable Aerial Copper	#3	SCLF	124	1967
Cable Aerial Copper	#3/0	SCLF	853	1963
Cable Aerial Copper	#3/0	SCLF	1,823	1967
Cable Aerial Copper	#3/0	SCLF	3,690	1968
Cable Aerial Copper	#4	SCLF	2,555	1963
Cable Aerial Copper	#4	SCLF	975	1965
Cable Aerial Copper	#4	SCLF	6,697	1967
Cable Aerial Copper	#4	SCLF	3,810	1970
Cable Aerial Copper	#4/0	SCLF	2,000	1965
Cable Aerial Copper	#6	SCLF	3,370	1963
Cable Aerial Copper	#6	SCLF	825	1970
Cable Aerial Copper	336 kcmil	SCLF	10,230	1968

Component	Size	Unit	Quantity	Approximate Year of Construction
Cable Aerial Copper	336 kcmil	SCLF	5,850	1975
Cable Aerial Copper	350 kcmil	SCLF	1,110	1968
Cable Aerial Copper	377 kcmil	SCLF	473	1968
Cable Aerial Copper	795 kcmil	SCLF	23,136	1959
Cable Aerial Aluminum	#1/0	SCLF	17,678	1963
Cable Aerial Aluminum	#1/0	SCLF	5,190	1965
Cable Aerial Aluminum	#1/0	SCLF	4,155	1967
Cable Aerial Aluminum	#1/0	SCLF	22,790	1968
Cable Aerial Aluminum	#1/0	SCLF	3,233	1970
Cable Aerial Aluminum	#2	SCLF	1,740	1963
Cable Aerial Aluminum	#2	SCLF	3,128	1965
Cable Aerial Aluminum	#2	SCLF	25,673	1967
Cable Aerial Aluminum	#2	SCLF	27,950	1970
Cable Aerial Aluminum	#2	SCLF	2,340	1972
Cable Aerial Aluminum	#2/0	SCLF	1,980	1967
Cable Aerial Aluminum	#2/0	SCLF	4,371	1968
Cable Aerial Aluminum	#2/0	SCLF	4,088	1970
Cable Aerial Aluminum	#3	SCLF	124	1967
Cable Aerial Aluminum	#3/0	SCLF	853	1963
Cable Aerial Aluminum	#3/0	SCLF	1,823	1967
Cable Aerial Aluminum	#3/0	SCLF	3,690	1968
Cable Aerial Aluminum	#4	SCLF	2,555	1963
Cable Aerial Aluminum	#4	SCLF	975	1965
Cable Aerial Aluminum	#4	SCLF	6,697	1967
Cable Aerial Aluminum	#4	SCLF	3,810	1970
Cable Aerial Aluminum	#4/0	SCLF	2,000	1965
Cable Aerial Aluminum	#6	SCLF	3,370	1963
Cable Aerial Aluminum	#6	SCLF	825	1970
Cable Aerial Aluminum	336 kcmil	SCLF	10,230	1968
Cable Aerial Aluminum	336 kcmil	SCLF	5,850	1975
Cable Aerial Aluminum	350 kcmil	SCLF	1,110	1968
Cable Aerial Aluminum	377 kcmil	SCLF	473	1968
Cable Aerial Aluminum	795 kcmil	SCLF	23,136	1959
Underground Line				
Conductor UG Copper	#1/0	SCLF	8,628	1963
Conductor UG Copper	#1/0	SCLF	26,945	1965
Conductor UG Copper	#1/0	SCLF	58,015	1968
Conductor UG Copper	#1/0	SCLF	34,977	1970
Conductor UG Copper	#2	SCLF	8,955	1963
Conductor UG Copper	#2	SCLF	25,471	1965
Conductor UG Copper	#2	SCLF	1,860	1970
Conductor UG Copper	#2/0	SCLF	1,160	1963
Conductor UG Copper	#2/0	SCLF	2,550	1965

Component	Size	Unit	Quantity	Approximate Year of Construction
Conductor UG Copper	#2/0	SCLF	5,961	1968
Conductor UG Copper	#2/0	SCLF	1,100	1970
Conductor UG Copper	#3/0	SCLF	2,670	1965
Conductor UG Copper	#3/0	SCLF	975	1972
Conductor UG Copper	#4/0	SCLF	4,676	1963
Conductor UG Copper	#4/0	SCLF	1,035	1965
Conductor UG Copper	#4/0	SCLF	4,050	1972
Conductor UG Copper	#6	SCLF	12,615	1963
Conductor UG Copper	#6	SCLF	3,150	1965
Conductor UG Copper	#10	SCLF	480	1963
Conductor UG Copper	#12	SCLF	745	1963
Conductor UG Copper	250 kcmil	SCLF	81,978	1963
Conductor UG Copper	250 kcmil	SCLF	98,041	1965
Conductor UG Copper	250 kcmil	SCLF	16,935	1968
Conductor UG Copper	250 kcmil	SCLF	21,726	1972
Conductor UG Copper	300 kcmil	SCLF	4,950	1963
Conductor UG Copper	300 kcmil	SCLF	1,005	1965
Conductor UG Copper	300 kcmil	SCLF	6,635	1972
Conductor UG Copper	336 kcmil	SCLF	3,075	1965
Conductor UG Copper	336 kcmil	SCLF	270	1968
Conductor UG Copper	350 kcmil	SCLF	4,485	1963
Conductor UG Copper	350 kcmil	SCLF	6,975	1965
Conductor UG Copper	350 kcmil	SCLF	5,025	1972
Conductor UG Copper	450 kcmil	SCLF	4,425	1956
Conductor UG Copper	500 kcmil	SCLF	37,520	1963
Conductor UG Copper	500 kcmil	SCLF	34,830	1965
Conductor UG Copper	500 kcmil	SCLF	50,709	1968
Conductor UG Copper	500 kcmil	SCLF	15,745	1972
Conductor UG Copper	1000 kcmil	SCLF	725	1963
Conductor UG Copper	1000 kcmil	SCLF	28,200	1989
Conductor UG Copper	1250 kcmil	SCLF	25,320	1957
Conductor UG Copper – Direct Bury	#1	SCLF	2,145	1963
Conductor UG Copper – Direct Bury	#1/0	SCLF	1,155	1963
Conductor UG Copper – Direct Bury	#1/0	SCLF	1,960	1965
Conductor UG Copper – Direct Bury	#2	SCLF	10,050	1963
Conductor UG Copper – Direct Bury	#2	SCLF	1,680	1965
Conductor UG Copper – Direct Bury	#2	SCLF	1,890	1970
Conductor UG Copper – Direct Bury	#2/0	SCLF	555	1965
Conductor UG Copper – Direct Bury	#2/0	SCLF	540	1968
Conductor UG Copper – Direct Bury	#3	SCLF	50	1963
Conductor UG Copper – Direct Bury	#4	SCLF	12,903	1965
Conductor UG Copper – Direct Bury	#4/0	SCLF	5,115	1970
Conductor UG Copper – Direct Bury	#6	SCLF	4,650	1963

Component	Size	Unit	Quantity	Approximate Year of Construction
Conductor UG Copper – Direct Bury	#6	SCLF	6,855	1965
Conductor UG Copper – Direct Bury	#8	SCLF	4,075	1963
Conductor UG Copper – Direct Bury	250 kcmil	SCLF	735	1968
Conductor UG Copper – Direct Bury	350 kcmil	SCLF	3,090	1963
Ductbank				
Ductbank – 2″ Orangeburg	1x1	LF	3,405	1963
Ductbank – 2″ Orangeburg	1x1	LF	365	1965
Ductbank – 4″ Orangeburg	1x1	LF	3,128	1963
Ductbank – 4″ Orangeburg	1x1	LF	1,545	1965
Ductbank – 4″ Orangeburg	1x1	LF	481	1975
Ductbank – 4″ Orangeburg	1x2	LF	4,815	1963
Ductbank – 4″ Orangeburg	1x2	LF	29,370	1965
Ductbank – 4″ Orangeburg	1x3	LF	750	1963
Ductbank – 4″ Orangeburg	1x3	LF	5,230	1965
Ductbank – 4″ Orangeburg	2x2	LF	15,776	1963
Ductbank – 4″ Orangeburg	2x2	LF	17,045	1965
Ductbank – 4″ Orangeburg	2x3	LF	11,614	1963
Ductbank – 4″ Orangeburg	2x3	LF	69,705	1965
Ductbank – 4″ Orangeburg	2x4	LF	4,017	1963
Ductbank – 4″ Orangeburg	2x4	LF	51,835	1965
Transformers – Pole Mount				
1 PH, Oil Filled	5 kVA	EA	1	1993
1 PH, Oil Filled	7.5 kVA	EA	1	1993
1 PH, Oil Filled	10 kVA	EA	13	1993
1 PH, Oil Filled	15 kVA	EA	48	1993
1 PH, Oil Filled	25 kVA	EA	45	1993
1 PH, Oil Filled	37.5 kVA	EA	48	1993
1 PH, Oil Filled	50 kVA	EA	56	1993
1 PH, Oil Filled	75 kVA	EA	55	1993
1 PH, Oil Filled	100 kVA	EA	23	1993
1 PH, Oil Filled	150 kVA	EA	1	1993
1 PH, Oil Filled	167 kVA	EA	1	1993
Transformers – Pad Mount				
1 PH, Oil Filled	10 kVA	EA	1	1989
1 PH, Oil Filled	15 kVA	EA	2	1989
1 PH, Oil Filled	25 kVA	EA	6	1989
1 PH, Oil Filled	37.5 kVA	EA	18	1989
1 PH, Oil Filled	50 kVA	EA	56	1989
1 PH, Oil Filled	75 kVA	EA	38	1989
1 PH, Oil Filled	100 kVA	EA	44	1989
1 PH, Oil Filled	150 kVA	EA	11	1989
1 PH, Oil Filled	167 kVA	EA	25	1989
1 PH, Oil Filled	200 kVA	EA	9	1989

Component	Size	Unit	Quantity	Approximate Year of Construction
1 PH, Oil Filled	250 kVA	EA	2	1989
1 PH, Oil Filled	300 kVA	EA	2	1989
1 PH, Oil Filled	333 kVA	EA	10	1989
1 PH, Oil Filled	500 kVA	EA	2	1989
3 PH, Oil Filled	45 kVA	EA	3	1989
3 PH, Oil Filled	50 kVA	EA	1	1989
3 PH, Oil Filled	75 kVA	EA	5	1989
3 PH, Oil Filled	112.5 kVA	EA	6	1989
3 PH, Oil Filled	150 kVA	EA	11	1989
3 PH, Oil Filled	225 kVA	EA	11	1989
3 PH, Oil Filled	250 kVA	EA	1	1989
3 PH, Oil Filled	300 kVA	EA	19	1989
3 PH, Oil Filled	500 kVA	EA	29	1989
3 PH, Oil Filled	750 kVA	EA	23	1989
3 PH, Oil Filled	1,000 kVA	EA	20	1989
3 PH, Oil Filled	1,500 kVA	EA	19	1989
3 PH, Oil Filled	2,000 kVA	EA	22	1989
3 PH, Oil Filled	2,500 kVA	EA	5	1989
3 PH, Oil Filled	3,750 kVA	EA	2	1989
3 PH, Oil Filled	4,000 kVA	EA	2	1989
3 PH, Oil Filled	13,100 kVA	EA	7	1989
3 PH, Oil Filled	14,550 kVA	EA	1	1989
Switching Station 444				
Transformer, PT	69 kV	EA	2	1957
Circuit Breakers - Gas	69 kV	EA	4	1993
Disconnect Switches, GOAB	69 kV	EA	12	1993
Disconnect Switches, 1 PH	69 kV	EA	7	1957
Control Batteries		KAH	0.10	1996
Battery Chargers		EA	1	1993
Fuses	69 kV	EA	2	1957
Insulators, Pedestal		EA	48	1957
Lightning Arresters	69 kV	EA	15	1957
Grounding Rods	8′	EA	36	1957
Grounding, Bare Copper	4/0	SCLF	3,000	1957
Bus Support Structure		EA	36	1957
Copper Bus		LF	1,200	1993
Breaker Control Panel		EA	4	1993
Substation Building	26′ x 19′	EA	1	1957
Breaker Bay Steel Support Structure		EA	4	1957
Steel Support Structure, Small		EA	14	1957
Steel Support Structure, Large		EA	1	1957
Chain Link Fence		LF	750	1957
Concrete Foundation		CY	328	1957

Component	Size	Unit	Quantity	Approximate Year of Construction
Substation A				
Transformer, Power (LTC)	69 kV	MVA	30	1996
Transformer, PT	13-26 kV	EA	6	1996
Insulators, Pedestal		EA	36	1957
Disconnect Switches, GOAB	69 kV	EA	8	1996
Disconnect Switches, Ground	69 kV	EA	1	1996
Lightning Arresters	13-26 kV	EA	6	1996
Lightning Arresters	69 kV	EA	9	1996
Circuit Breakers - Gas	69 kV	EA	3	1993
Circuit Breakers - Gas	69 kV	EA	2	1996
Circuit Breakers - Vacuum	13-26 kV	EA	15	1996
Control Batteries		KAH	0.10	1996
Battery Chargers		EA	1	1996
Substation Building	26′ x 19′	EA	1	1957
Breaker Bay Steel Support Structure		EA	3	1957
Copper Bus		LF	500	1957
Breaker Control Panel		EA	20	1996
Steel Support Structure, Small		EA	3	1957
Grounding, Bare Copper	4/0	SCLF	1,200	1957
Terminator Cable, Outdoor	1250 kcmil	EA	6	1957
Terminator Cable, Outdoor	450 kcmil	EA	3	1957
Grounding Rods	8′	EA	24	1957
Chain Link Fence		LF	440	1957
Concrete Foundation		CY	164	1957
Substation B				
Transformer, Power (LTC)	69 kV	MVA	30	1970
Transformer, Power (LTC)	69 kV	MVA	15	2004
Insulators, Pedestal		EA	72	1957
Disconnect Switches, GOAB	69 kV	EA	6	1970
Disconnect Switches, 1 PH	69 kV	EA	1	1990
Lightning Arresters	69 kV	EA	3	1970
Lightning Arresters	69 kV	EA	3	2004
Circuit Breakers - Gas	69 kV	EA	5	1990
Circuit Breakers - Oil	69 kV	EA	1	1970
Circuit Breakers - Vacuum	13-26 kV	EA	6	2004
Control Batteries		KAH	0.10	2002
Battery Chargers		EA	1	2002
Substation Building	26′ x 19′	EA	1	1957
Breaker Bay Steel Support Structure		EA	6	1957
Copper Bus		LF	600	1957
Breaker Control Panel		EA	6	1990
Breaker Control Panel		EA	6	2004
Grounding, Bare Copper	4/0	SCLF	2,000	1957

Component	Size	Unit	Quantity	Approximate Year of Construction
Terminator Cable, Outdoor	1250 kcmil	EA	6	1957
Grounding Rods	8′	EA	50	1957
Chain Link Fence		LF	600	1957
Concrete Foundation		CY	272	1957
Substation C				
Transformer, Power (LTC)	69 kV	MVA	74	1990
Transformer, Power (LTC)	69 kV	MVA	15	1996
Transformer, Grounding		EA	2	1990
Insulators, Pedestal		EA	72	1957
Disconnect Switches, GOAB	13-26 kV	EA	24	1957
Disconnect Switches, GOAB	69 kV	EA	6	1990
Disconnect Switches, Ground	69 kV	EA	1	1990
Lightning Arresters	13-26 kV	EA	3	1993
Lightning Arresters	69 kV	EA	6	1990
Circuit Breakers - Gas	69 kV	EA	6	1990
Circuit Breakers - Vacuum	13-26 kV	EA	23	1990
Circuit Breakers - Vacuum	13-26 kV	EA	26	1993
Control Batteries		KAH	0.10	1996
Battery Chargers		EA	1	1996
Substation Building	26′ x 19′	EA	1	1957
Breaker Bay Steel Support Structure		EA	6	1957
Copper Bus		LF	600	1957
Bus Support Structure		EA	3	1993
Breaker Control Panel		EA	6	1990
Breaker Control Panel		EA	26	1993
Steel Support Structure, Small		EA	3	1993
Grounding, Bare Copper	4/0	SCLF	2,000	1957
Terminator Cable, Outdoor	1250 kcmil	EA	6	1957
Grounding Rods	8′	EA	50	1957
Chain Link Fence		LF	600	1957
Concrete Foundation		CY	272	1957
Substation D				
Transformer, Power (LTC)	69 kV	MVA	15	1986
Transformer, Power (LTC)	69 kV	MVA	16	1993
Transformer, PT	13-26 kV	EA	3	1986
Transformer, PT	13-26 kV	EA	3	1993
Insulators, Pedestal		EA	36	1957
Disconnect Switches, GOAB	69 kV	EA	5	1993
Disconnect Switches, Ground	69 kV	EA	1	1993
Lightning Arresters	13-26 kV	EA	6	1993
Lightning Arresters	69 kV	EA	3	1986
Lightning Arresters	69 kV	EA	6	1993
Circuit Breakers - Oil	69 kV	EA	1	1986

Component	Size	Unit	Quantity	Approximate Year of Construction
Circuit Breakers - Gas	69 kV	EA	4	1993
Circuit Breakers - Vacuum	13-26 kV	EA	10	1983
Circuit Breakers - Vacuum	13-26 kV	EA	9	1993
Control Batteries		KAH	0.10	1996
Battery Chargers		EA	1	1996
Substation Building	26′ x 19′	EA	1	1957
Breaker Bay Steel Support Structure		EA	3	1957
Copper Bus		LF	500	1957
Breaker Control Panel		EA	10	1983
Breaker Control Panel		EA	1	1986
Breaker Control Panel		EA	3	1993
Steel Support Structure, Small		EA	3	1957
Grounding, Bare Copper	4/0	SCLF	1,200	1957
Terminator Cable, Outdoor	1250 kcmil	EA	6	1957
Terminator Cable, Outdoor	450 kcmil	EA	3	1957
Generator Set	35 kW	EA	1	2001
Oil Pumps	5 HP	EA	2	1957
Grounding Rods	8′	EA	24	1957
Chain Link Fence		LF	410	1957
Concrete Foundation		CY	164	1957
Substation E				
Transformer, Power (LTC)	69 kV	MVA	15	1958
Transformer, CT	69 kV	EA	3	1958
Transformer, PT	13-26 kV	EA	2	2003
Insulators, Pedestal		EA	30	1958
Disconnect Switches, GOAB	69 kV	EA	1	1993
Disconnect Switches, Ground	69 kV	EA	1	1993
Lightning Arresters	13-26 kV	EA	3	2003
Lightning Arresters	69 kV	EA	3	1993
Circuit Breakers - Gas	69 kV	EA	1	1993
Circuit Breakers - Vacuum	13-26 kV	EA	15	2003
Control Batteries		KAH	0.10	1996
Battery Chargers		EA	1	1996
Substation Building	26′ x 19′	EA	1	1958
Breaker Bay Steel Support Structure		EA	2	1958
Copper Bus		LF	240	1958
Breaker Control Panel		EA	1	1993
Breaker Control Panel		EA	7	2003
Steel Support Structure, Small		EA	1	1958
Grounding, Bare Copper	4/0	SCLF	800	1958
Terminator Cable, Outdoor	450 kcmil	EA	3	1958
Grounding Rods	8′	EA	20	1958
Chain Link Fence		LF	370	1958

Component	Size	Unit	Quantity	Approximate Year of Construction
Concrete Foundation		CY	91	1958
Substation F				
Transformer, Power (LTC)	69 kV	MVA	15	1958
Transformer, CT	69 kV	EA	3	1958
Disconnect Switches, GOAB	69 kV	EA	1	1958
Disconnect Switches, Ground	69 kV	EA	1	1958
Lightning Arresters	13-26 kV	EA	3	1995
Lightning Arresters	69 kV	EA	3	1958
Circuit Breakers - Vacuum	13-26 kV	EA	7	1995
Control Batteries		KAH	0.10	1995
Battery Chargers		EA	1	1995
Substation Building	26′ x 19′	EA	1	1958
Breaker Bay Steel Support Structure		EA	2	1958
Copper Bus		LF	240	1958
Breaker Control Panel		EA	7	1995
Steel Support Structure, Small		EA	1	1958
Grounding, Bare Copper	4/0	SCLF	800	1958
Terminator Cable, Outdoor	450 kcmil	EA	3	1958
Grounding Rods	8′	EA	20	1958
Chain Link Fence		LF	370	1958
Concrete Foundation		CY	91	1958
Substation H				
Transformer, Power (LTC)	69 kV	MVA	15	1972
Transformer, Power (LTC)	69 kV	MVA	15	1989
Transformer, PT	13-26 kV	EA	3	1989
Transformer, PT	13-26 kV	EA	3	1997
Disconnect Switches, GOAB	69 kV	EA	6	1989
Disconnect Switches, GOAB	69 kV	EA	2	2004
Disconnect Switches, Ground	69 kV	EA	2	1989
Insulators, Pedestal		EA	24	1989
Lightning Arresters	13-26 kV	EA	3	1989
Lightning Arresters	13-26 kV	EA	3	1997
Lightning Arresters	69 kV	EA	3	1972
Lightning Arresters	69 kV	EA	3	1989
Circuit Breakers - Gas	69 kV	EA	3	1989
Circuit Breakers - Vacuum	13-26 kV	EA	5	1989
Circuit Breakers - Vacuum	13-26 kV	EA	5	1997
Control Batteries		KAH	0.16	1996
Battery Chargers		EA	1	1996
Breaker Bay Steel Support Structure		EA	3	1989
Copper Bus		LF	360	1989
Breaker Control Panel		EA	8	1989
Breaker Control Panel		EA	5	1997

Component	Size	Unit	Quantity	Approximate Year of Construction
Breaker Control Panel		EA	2	2004
Circuit Switcher	69 kV	EA	2	2004
Grounding, Bare Copper	4/0	SCLF	800	1989
Terminator Cable, Outdoor	1000 kcmil	EA	3	1989
Grounding Rods	8′	EA	20	1972
Chain Link Fence		LF	370	1972
Concrete Foundation		CY	160	1989
Concrete Foundation		CY	45	2004
Substation J				
Transformer, Power (LTC)	69 kV	MVA	15	1989
Transformer, Power (LTC)	69 kV	MVA	15	1989
Transformer, PT	13-26 kV	EA	3	1989
Transformer, PT	13-26 kV	EA	3	1997
Disconnect Switches, GOAB	69 kV	EA	8	1989
Disconnect Switches, Ground	69 kV	EA	2	1989
Insulators, Pedestal		EA	45	1989
Lightning Arresters	13-26 kV	EA	3	1989
Lightning Arresters	13-26 kV	EA	3	1997
Lightning Arresters	69 kV	EA	9	1989
Lightning Arresters	69 kV	EA	3	1997
Circuit Breakers - Gas	69 kV	EA	3	1989
Circuit Breakers - Gas	69 kV	EA	2	1995
Circuit Breakers - Vacuum	13-26 kV	EA	6	1989
Circuit Breakers - Vacuum	13-26 kV	EA	5	1997
Control Batteries		KAH	0.10	1995
Battery Chargers		EA	1	1989
Breaker Bay Steel Support Structure		EA	4	1989
Copper Bus		LF	600	1989
Breaker Control Panel		EA	9	1989
Breaker Control Panel		EA	2	1995
Breaker Control Panel		EA	5	1997
Grounding, Bare Copper	4/0	SCLF	2,000	1989
Terminator Cable, Outdoor	1000 kcmil	EA	3	1989
Grounding Rods	8′	EA	50	1989
Chain Link Fence		LF	600	1989
Concrete Foundation		CY	160	1989
Loop Termination Structure				
Disconnect Switches, Ground	69 kV	EA	2	1957
Lightning Arresters	69 kV	EA	6	1957
Grounding, Bare Copper	4/0	SCLF	640	1957
Terminator Cable, Outdoor	1250 kcmil	EA	6	1957
Grounding Rods	8′	EA	16	1957
Steel Support Structure, Large		EA	1	1957

Component	Size	Unit	Quantity	Approximate Year of Construction
Chain Link Fence		LF	300	1957
Concrete Foundation		CY	40	1957
Cathodic Protection for 69kV Oil-filled Pipe-type Cable				
Anodes, High Silicon Cast Iron	1½"x5'	EA	3	1969
Cable, Type OR2	#6	LF	100	1969
Rectifier, Air Cooled	6V/5A	EA	1	1969
Test Stations		EA	11	1969
Poles				
Wood	40'	EA	101	1965
Wood	40'	EA	234	1967
Wood	40'	EA	405	1968
Steel	45'	EA	14	1970
Pole Arms	6'	EA	228	1965
Pole Arms	6'	EA	520	1967
Pole Arms	6'	EA	878	1968
Additional Inventory				
Guys Anchors and Hardware		EA	115	1970
Lightning Arresters	13-26 kV	EA	702	1993
Sectionalizing Switch, Pad Mt.		EA	239	1968
Terminator Cable – Outdr, Pole Mt.	15 kV	EA	41	1965
Terminator Cable – Outdr, Pole Mt.	15 kV	EA	93	1967
Terminator Cable – Outdr, Pole Mt.	15 kV	EA	160	1968
Meters - Digital		EA	163	1970
Meters - Analog		EA	145	1970
Joints and Dead Ends		EA	70	1970
Disconnect Switches		EA	3	1965
Disconnect Switches		EA	7	1967
Disconnect Switches		EA	12	1968
Utility Vaults	6x10x6	EA	1,049	1970
Fused Cutouts		EA	637	1993
Pole, Grounding	8'	EA	235	1965
Transformer Grounding	8'	EA	611	1989
Transformer Pads	4x6	SF	14,664	1989
Steel Support Structure, Small		EA	24	1970
HUFFMAN RADAR SITE				
Cable Aerial Aluminum	#2 ACSR	SCLF	1,653	1970
1 PH, Dry Type, Transformer, Pole Mt.	15 kVA	EA	3	1970
Wood Poles	45'	EA	2	1970
Pole Arms	6'	EA	2	1970
MILITARY FAMILY HOUSING				
THE WOODS				
Cable Aerial Aluminum	#2	SCLF	4,590	1984

Component	Size	Unit	Quantity	Approximate Year of Construction
Conductor, UG, Copper – Direct Bury	#1/0	SCLF	2,130	1984
Conductor, UG, Copper – Direct Bury	#2	SCLF	9,370	1984
Conductor, UG, Copper – Direct Bury	#2/0	SCLF	10,854	1984
Transformer - 1 PH, Oil Filled, Pad Mt.	30 kVA	EA	3	1989
Transformer - 1 PH, Oil Filled, Pad Mt.	75 kVA	EA	22	1989
Transformer - 1 PH, Oil Filled, Pad Mt.	167 kVA	EA	1	1989
Transformer - 3 PH, Oil Filled, Pad Mt.	112.5 kVA	EA	1	1989
Transformer - 3 PH, Oil Filled, Pad Mt.	150 kVA	EA	1	1989
Wood Poles	45′	EA	2	1984
Pole Arms	6′	EA	2	1984
Transformer Grounding	8′	EA	28	1989
Transformer Pads	4x6	SF	672	1989
Meters - Digital		EA	1	1984
BRICK QUARTERS				
Conductor, UG, Copper – Direct Bury	#2	SCLF	760	1970
Conductor, UG, Copper – Direct Bury	#4/0	SCLF	390	1970
Conductor, UG, Copper	#2/0	SCLF	13,815	1972
Transformer - 1 PH, Oil Filled, Pad Mt.	75 kVA	EA	9	1970
Manholes		EA	13	1970
Ductbank, 4″ PVC	1x2	LF	4,605	1972
Transformer Grounding	8′	EA	9	1970
Transformer Pads	4x6	SF	216	1970
Meters - Digital		EA	2	1970
PINE ESTATES				
Cable Aerial Aluminum	336 kcmil	SCLF	1,200	1984
Conductor, UG, Copper – Direct Bury	#2	SCLF	6,732	1984
Conductor, UG, Copper – Direct Bury	#4/0	SCLF	9,369	1984
Transformer - 1 PH, Oil Filled, Pad Mt.	75 kVA	EA	16	1984
Ductbank, 4″ PVC	1x2	LF	25	1984
Wood Poles	45′	EA	2	1984
Pole Arms	6′	EA	2	1984
Manholes		EA	1	1984
Transformer Grounding	8′	EA	16	1984
Transformer Pads	4x6	SF	384	1984
Meters - Digital		EA	1	1984
GREEN ACRES				
Conductor, UG, Copper – Direct Bury	#2	SCLF	980	1970
Conductor, UG, Copper – Direct Bury	#2	SCLF	9,630	1984
Conductor, UG, Copper – Direct Bury	#4/0	SCLF	5,205	1984
Transformer - 1 PH, Oil Filled, Pad Mt.	75 kVA	EA	14	1984
Transformer Grounding	8′	EA	14	1984
Transformer Pads	4x6	SF	336	1984
Meters - Digital		EA	1	1970

Component	Size	Unit	Quantity	Approximate Year of Construction
THE PRAIRIES				
Cable Aerial Aluminum	#3/0	SCLF	934	1970
Cable Aerial Aluminum	#1/0	SCLF	73,557	1970
Cable Aerial Aluminum	#2	SCLF	3,469	1970
Cable Aerial Aluminum	#4	SCLF	270	1970
Cable Aerial Aluminum	#10	SCLF	12,261	1970
Conductor UG Copper – Direct Bury	#1/0	SCLF	18,218	1970
Conductor UG Copper – Direct Bury	#1/0	SCLF	6,236	2002
Conductor UG Copper – Direct Bury	#2	SCLF	2,440	1970
Transformer - 1 PH, Oil Filled, Pad Mt.	100 kVA	EA	32	2002
Transformer - 1 PH, Oil Filled, Pad Mt.	150 kVA	EA	31	2002
Ductbank – 2″ PVC	1x1	LF	81	2002
Transformer Grounding	8′	EA	10	2002
Transformer Pads	4x6	SF	1,512	2002
Meters - Digital		EA	2	2002
Wood Poles	45′	EA	163	1970
Wood Poles	45′	EA	110	2002
Pole Arms	6′	EA	163	1970
Pole Arms	6′	EA	110	2002

Notes:
UG = underground
OH = overhead
ACSR = aluminum-conducting-steel-reinforced
kcmil = thousand circular mils
PVC = polyvinyl chloride
SF = square foot
KAH = kilo ampere hours
kW = kilowatt
MVA = mega volt ampere
Galv. = galvanized steel
PT = potential transformers
Mt. = mount
Outdr. = outdoor
PH = phase
kV = kilovolt
kVA = kilovolt ampere
GOAB = gang operated air brake
LF = linear feet
EA = each
SCLF = single conductor linear feet
MVAR = mega volt ampere reactive
CY = cubic yards
Outdr. = outdoor
CT = current transfomer
LTC = load tap changing
W = watt

J1.2.2 Electric Distribution System Non-Fixed Equipment and Specialized Tools

Table 2 lists other ancillary equipment (spare parts) and **Table 3** lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment, vehicles, and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment, vehicles, and tools.

TABLE 2
Spare Parts
Electric Distribution System – Wright-Patterson AFB

Quantity	Item	Description	Remarks
The Installation has identified no spares available for purchase.			

TABLE 3
Specialized Vehicles and Tools
Electric Distribution System – Wright-Patterson AFB

Description	Quantity	Location	Maker
None			

J1.2.3 Electric Distribution System Manuals, and Records Drawings,

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 4
Manuals, Drawings, and Records
Electric Distribution System – Wright-Patterson AFB

Quantity	Item	Description	Remarks
1	Utility Maps	Base Electric System, "Vision" Graphical Information System 2002	Electronic format
1	Utility Maps	Base Electric System, 1997, 1''-400'	Electronic format
1	Utility Maps	The Prairies at Wright Field, Utility Construction Drawings, 2002	Electronic
Multiple	Drawings	Single line diagrams of substations, distribution network, switching diagrams, etc.	
1	Listing	Electric Meters	Shows building served, location
1	Planning Document	General Plan	One volume
1	Planning Document	Comprehensive Plan	Multiple volumes
1	Manual	Substation Manuals	
1	Historical File	Consumption Data	
1	Report	Annual Cathodic Protection Report, 2003	One Volume
1	Manuals	Cathodic Protection	

J1.3 Specific Service Requirements

The service requirements for the Wright-Patterson AFB electric distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Wright-Patterson AFB electric distribution system and are in addition to those found in Section C. If there is a conflict between requirements described below and Section C, the requirements listed below take precedence over those found in Section C.

- IAW Condition C of Attachment 1 to the ROW, the Contractor shall follow the Base digging permit process. The Contractor will be required to mark his own utilities and will be responsible for initiating, officiating, and tracking digging permits for his own utilities and shall obtain all necessary authorizations, permits and line locates prior to performing any excavations on Base. The Contractor will provide not less than 2 and not more than 5 working days notice (emergencies being excepted) of any needed excavations to the 88th ABW/CE and to said Utilities Privatization Administrative Contracting Officer so the location of underground utilities may be located and marked by the applicable utility owner. The applicable utility owner must mark their utilities as requested within 48 hours of receipt of request for non-emergency work.
- The Contractor shall support the Base digging permit process by routinely accepting and promptly processing digging permit requests which may impact on the integrity of the Contractor's utility system and/or the safety of the requestors. The Contractor shall be a participant of the Base digging permit process and shall attend any meetings called in support of the process. Contractor shall be responsible to locate and mark their utilities in the affected areas. The digging permit process involves weekly attendance at the scheduled meeting and subsequent appointments for location and marking of utilities throughout the week.
- Because of the critical nature of many WPAFB mission requirements, the Contractor will respond to electrical problem within 10 minutes of notification during duty hours and within one hour during non-duty hours.
- The Contractor's representative that responds to emergency service requests shall be knowledgeable of the utility system and the Contractor's Service Interruption/Contingency Plan. The representative shall be able to assess damages and estimate the time it will take to make temporary or full-service repairs. In accordance with Paragraph H.6, Rights of the Government to Perform Function with Its Own Personnel, the Government reserves the right to substitute or supplement the Contractor's efforts during emergency situations where the Contractor's failure or inability to perform is beyond the Contractor's control and without the Contractor's fault or negligence. In this situation, the Contractor would not be held responsible for costs incurred by the Government. However, the Contractor could be held financially responsible if the Government substitutes or supplements the Contractor's efforts during emergency situations and the Contractor's failure or inability to perform was the result of the fault or negligence of the Contractor.
- IAW Paragraph C.5.1.3, and in compliance with Base architectural standards, new and renewal distribution piping shall normally be installed using the most economical

trenching method unless otherwise prohibited by the Government. Excavation of paved surfaces is prohibited without consultation and approval from the Base Civil Engineer.

- The SCADA system is not included with the electric system being privatized. The Government shall retain ownership of the sensors, communications, and other equipment associated with the SCADA system. The SCADA system may be used by the Government to monitor electric facilities. The Government will maintain the sensors, antennas, and other communications, and associated ancillary equipment. The Government will have no obligation to maintain any portion of the SCADA system or its associated sensors, equipment, or communications for other than the benefit of the Government. The Contractor may purchase, install, operate, and maintain a SCADA system.
- Upon reasonable request and with reasonable notice from the Civil Engineers, the Contractor shall provide escorted tours to provide instruction and demonstration of electric distribution system operations, maintenance and construction. The electric distribution system includes substations, transformers, other electric system devices, and the Contractor's shop(s) and storage areas.
- The Contractor shall coordinate any changes to looped circuits with the Base Civil Engineer.
- IAW Paragraph C.9, Coordination of Work, the Contractor shall coordinate planned outages using the Civil Engineer Outage Form AF103.
- In addition to Section 8 of the ROW, the utility contractor (grantee) shall repair at no cost to the Government any utilities damaged by other contractors or Government organizations because Contractor utilities were improperly marked by the Contractor. Property damaged by the contractor in the conduct of his business shall be corrected in accordance with ROW Section 8.
- IAW Section 12 of the ROW, the Contractor is responsible for all supporting utilities that may be required to own, operate and maintain the utility system subject to privatization. For example, electricity is needed to power substation lighting. Supporting utilities are defined as the supply of electricity, natural gas, water, or wastewater collection, and any infrastructure or materials necessary to connect to the supply of electricity, natural gas, water, or wastewater collection. The Contractor shall coordinate with the WPAFB Civil Engineer and the Contracting Officer for any supporting utilities to be provided by the Government.
- The Contractor shall enter into a Memorandum of Understanding (MOU) with the Base Fire Department for fire protection of all facilities included in the purchase of the utility. The MOU shall be completed during the transition period and a copy provided to the Contracting Officer.
- The Contractor shall abide by Base fire protection requirements. The utility system purchased by the Contractor includes facilities. These facilities may or may not include fire alarm systems. Where required by federal, state or local regulation, the Contractor shall maintain the fire alarm system for all facilities owned and operated by the Contractor. The Contractor shall permit Fire Department personnel access to their facilities to perform fire inspections and emergency response.

- IAW Paragraph C.9.8, Exercises and Crisis Situations Requiring Utility Support, the Contractor shall provide support as directed by the Civil Engineers for exercises and crisis situations.
- The Contractor shall ensure that employees understand, implement and enforce Force Protection Condition (FPCON) requirements specified in AFI 10-245. The Contractor is advised that FORCE PROTECTION conditions vary and that these changes may cause delays in access to WPAFB. These conditions are outlined in the WPAFB FPCON Checklist. This checklist will be available in the technical library. The Contractor will plan accordingly to provide uninterrupted support. Compliance with and staffing in support of FORCE PROTECTION condition changes shall not result in service charge adjustments to the contract.
- IAW Section 8 of the ROW, the Contractor shall maintain existing security mechanisms (i.e. locks, fences) to protect the utility systems. The security mechanisms should prevent tampering and sabotage. Should the Contractor become aware of any suspicious incident, security breach or act of sabotage at or against the utility system, or any of its associated facilities, they will immediately contact the Security Police Squadron and Civil Engineer Squadron.
- Due to heightened security concerns on military installations, all Contractor and subcontractor personnel who must enter WPAFB to perform this contract must undergo a background check. Background checks will be conducted using the following information: name, driver's license number, social security number, and date of birth. These procedures are considered permanent. Any Contractor or subcontractor employee that does not consent to this background investigation will not be allowed access to WPAFB. Any derogatory information resulting from the investigation, or which otherwise becomes known to the contracting officer, may also result in such individuals being prevented from entering the installation. However, nothing in this requirement shall excuse the Contractor from proceeding with any resulting contract as required.
- The Contractor shall ensure their employees, and those of their subcontractors, have the proper credentials allowing them to work in the United States. Employees must have valid Social Security Cards. Non-US Citizens must have current and valid permission from the Bureau of Immigration and Naturalization. Persons found to be undocumented or illegal aliens will be remanded to the proper authorities. The Contractor shall not be entitled to any compensation for delays or expenses associated with complying with the provisions of this requirement. Contractor personnel and their subcontractors must identify themselves as Contractors or subcontractors during meetings, telephone conversations, in electronic messages, or correspondence related to this contract. Contractor occupied facilities on WPAFB such as offices, separate rooms, or cubicles must be clearly identified with Contractor-supplied signs, name plates or other identification, showing that these are work areas for Contractor or subcontractor personnel.
- The Contractor shall notify the WPAFB Safety Office and the Contracting Officer, or a designated Government Representative (GR) within one (1) hour of all mishaps or incidents at or exceeding $2,000 (material + labor) in damage to DOD or contractor-

owned property. This notification requirement shall also include physiological mishaps/incidents. A written or e-mail copy of this mishap/incident notification shall be sent within three calendar days to the GR, who will forward it to the Safety Office. For information not available at the time of initial notification, the Contractor shall provide the remaining information not later than 20 calendar days after the mishap, unless extended by the Contracting Officer. Mishap notifications shall contain, as a minimum, the following information:

(a) Contract, Contract Number, Name and Title of Person(s) Reporting

(b) Date, Time and exact location of mishap/incident

(c) Brief Narrative of mishap/incident (Events leading to accident/incident)

(d) Cause of mishap/incident, if known

(e) Estimated cost of mishap/incident (material and labor to repair/replace)

(f) Nomenclature of equipment and personnel involved in mishap/incident

(g) Corrective actions (taken or proposed)

(h) Other pertinent information.

- If requested by Government Personnel or designated Government representative, the Contractor shall immediately secure the mishap scene/damaged property and impound pertinent maintenance and training records, until released by the Safety Office. Also, the Contractor and their subcontractors shall cooperate fully and assist Government personnel until the investigation is finalized and closed out. Safety requirements listed in this package that do not relate to the Contractor's operations or services shall be considered self-deleting as mutually agreed by the Contractor and the Contracting Officer.
- The Contracting Officer is the only individual authorized to incur Government obligations and to make changes to contracts. The Administrative Contracting Officer (ACO) may make certain obligations and changes as provided by the Federal Acquisition Regulation part 42.302 (and supplements) or as may be specifically designated in writing by the Procuring CO. The Contracting Officer's Technical Representative (COTR), if designated, is strictly limited to the authority described in the designation letter executed by the CO. The Installation Commander's duly authorized representative is strictly limited to the tasks described and under no circumstance is authorized to incur additional obligations on behalf of the Government. The Defense Energy Support Center (DESC) is the procuring agent, and after appropriate post-award contract management transition, the WPAFB Contracting Directorate shall assume the procuring and administration contracting authority.
- IAW Condition F of Attachment 1 to the ROW, the Contractor shall be responsible for grounds maintenance (except grass cutting) of all areas within the boundaries of the ROW in accordance with Base standards. Vegetation control will be the responsibility of the Contractor inside a secured area (i.e., substations). Contractor will not be responsible for repairs of ROW damaged caused by the AF or a third party.

- IAW ROW, the Contractor shall not deliberately injure or kill protected species of wildlife (i.e., non-domesticated animals) without permission from the Contracting Officer, or other representative(s) as designated by the Contracting Officer.
- IAW Condition J of Attachment 1 to the ROW, the provisions of ROW Sections 15, 17 and 18 also cover sites identified under the Resource Conservation Recovery Act (RCRA) Corrective Action program.
- The Contractor shall not perform alterations to any building or structure deemed to be eligible or potentially eligible for placement on the National Register of Historic Places until approved by said officer.

J1.4 Current Service Arrangement

Dayton Power and Light Company (DP&L) supplies electricity to Wright-Patterson AFB and its GSUs.

During fiscal year (FY) 2002, the peak month for electric consumption was July at 38,007 megawatt hours (MWh); August was only slightly lower at 37,668 MWh. The low month was February at 28,143 MWh; November was only slightly higher at 28,880 MWh. Consumption during the other 8 months average approximately 32,000 MWh. Total consumption for FY 2002 was 383,150 MWh.

For FY 2003, the peak month for electric consumption was August at 38,460 MWh; July was only slightly lower at 37,981 MWh. The low month was February at 27,874 MWh; November was the next lowest at 28,989 MWh. As in FY 2002, consumption during the other 8 months averaged approximately 32,000 MWh. Total consumption for FY 2003 was 384,568 MWh.

Peak demand was approximately 69 MW.

Extensive historical consumption data will be available for review in the technical library.

J1.5 Secondary Metering

J1.5.1 Existing Secondary Meters

Table 6 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings for all secondary meters IAW Paragraph C.3.3 and J1.6 below:

TABLE 6
Existing Secondary Meters
Electric Distribution System – Wright-Patterson AFB

Meter ID	Bldg No.	Location	Meter Type
		Main Base Meters	
08410E0101	08410	Family Camp Meter #1	Digital
08410E0201	08410	Family Camp Meter #2	Digital
10262E0101	10262	Sub Beside Bldg	Digital
10252E0301	10264	Main "B"	Digital

Meter ID	Bldg No.	Location	Meter Type
10262E0401	10264	Main "A"	Digital
10262E0501	10262	Basement PDC – 3(c)	Digital
10262E0601	10262	Basement Main Breaker	Digital
10262E0701	10262	Basement PDC F	Digital
10262E0801	10262	PDC C	Digital
10266E0101	10266	East Vault basement midway in Bldg	Digital
10271E0102	10271	Warrior Hall Mtr "A"	Digital
10271E0202	10271	Warrior Hall Mtr "B"	Digital
10274E0102	10274	DP (Civilian Personnel)	Digital
10280E0101	10280	HQ AFMC Door 6	Analog
10281E0101	10281	DA by Door 13	Analog
10293E0101	10293	MWR Recycling Center	Analog
10297E0101	10297	Across from 10280 (vault SW corner)	Digital
10800E0102	10800	Officer's Club	Digital
10813E0101	10813	Golf Pro Shop	Analog
10825E0102	10825	VOQ 480 Volt in Basement	Digital
10825E0201	10825	VOQ 208V courtyard basement	Digital
10826E0101	10826	VOQ 480V Basement in back	Digital
10826E0201	10826	VOQ 208V basement in back	Digital
10827E0101	10833	VOQ Group	Analog
10828E0101	10828		Analog
10830E0102	10830	Hospital Utility #1 (in Fac #10840)	Digital
10830E0202	10830	Hospital Utility #2 (in Fac #10840)	Digital
10830E0301	10830	Hospital Feed #1 (in Fac #10840)	Analog
10830E0401	10830	Hospital Feed #2 (in Fac #10840)	Analog
10830E0501	10830	Hospital Chiller #1 (in Fac #10840)	Analog
10830E0601	10830	Hospital Chiller #2 (in Fac #10840)	Analog
10831E0101	10831	Fisher House	Analog
10849E0102	10849	Basement Vault Dodge Gym 480V Side	Digital
10849E0202	10849	Basement Vault Dodge Gym 208V Side	Digital
11403E0101	11403	Child Care	Digital
11457E0102	11457	AT&T Transformer Pen beside Bldg	Digital
19010E0101	19010	Sub H	Digital
19011E0102	19011	Sub H FTD Circuit B72H (old #16)	Digital
19011E0202	19011	Sub H FTD Circuit B71G (old #11)	Digital
19014E0101	19014	Golf Well House	Analog
19015E0101	19015	SUB J	Analog
19015E0201	19015	SUB J	Analog
20004E0101	20004B	Hangar B	Analog
20004E0201	20004B	Hangar B	Analog
20004E0302	20004C	PDP-C (Museum) (Inside back of Bldg)	Digital
20004E0402	20004E	PDP-E (Museum) (Inside back of Bldg)	Digital
20005E0101	20005	Aircraft Shop Main Feeder	Analog

Meter ID	Bldg No.	Location	Meter Type
20006E0101	20006	Museum	Analog
20006E0202	20006	Museum	Digital
20012E0101	20012	Transformer #3 (basement back side)	Digital
20012E0201	20012	Transformer #2 (basement back side)	Digital
20012E0301	20012	Transformer #4 (basement back side)	Digital
20012E0501	20012	Penthouse (upstairs back side)	Digital
20016E0101	20016	Vault	Analog
20016E0201	20016	Vault	Analog
20016E0301	20016	Vault	Analog
20016E0401	20016	Vault	Analog
20016E0501	20016	Dry Cleaners (back wall)	Analog
20016E0601	20016	Post Office	Analog
20016E0701	20016	Restaurant (Snack Bar)	Analog
20016E0801	20016	BX	Analog
20016E0901	20016	Rec Office	Analog
20016E1001	20016	Bank Office	Analog
20016E1101	20016	Credit Union	Analog
20018E0102	20018F	Sub-Meter (next to HVM upstairs)	Digital
20018E0201	20018F	3300 ACM	Digital
20018E0301	20018D	West end of 20018D ph#52065	Analog
20022E0301	20022B	Army Corps	Digital
20023E0101	20023	B7J	Analog
20023E0201	20023	B4K	Analog
20024E0101	20024A	2nd Floor control room #48	Digital
20024E0201	20024A	2nd Floor control room #49	Digital
20024E0301	20024A	2nd Floor control room #47	Digital
20030E0101	20030	Motion Picture Lab	Analog
20031E0101	20031	480V	Digital
20031E0201	20031	B4K	Digital
20031E0301	20031	B4L	Digital
20031E0401	20031	168	Digital
20031E0501	20031	192	Digital
20031E0601	20031	84	Digital
20032E0101	20032	SC Lab Materials	Analog
20032E0201	20032	SC Lab Materials	Analog
20032E0301	20032	SC Lab Materials	Analog
20032E0401	20032	SC Lab Materials	Analog
20033E0101	20033	On Transformer	Analog
20033E0301	20033	480V Side MCCA (in basement)	Digital
20033E0401	20033	120/208V side MPP-1 (in basement)	Digital
20045E0201	20045	T-5	Digital
20045E0301	20045	T-4	Digital
20045E0401	20045	T-1	Digital

Meter ID	Bldg No.	Location	Meter Type
20050E0103	20050	Aircraft Research (in vault in back)	Digital
20052E0101	20052	By wind tunnel (west side on transformer)	Digital
20056E0101	20056	PDC-#2	Digital
20056E0201	20056	PDC-#1 (east side)	Digital
20057E0101	20057	Vault on east side	Digital
20071E0101	20071B	Lab/Fuels Storage	Analog
20071E0201	20071B	Storage Contractor	Analog
20079E0101	20079	(on back side of bldg)	Digital
20093E0101	20093	Supply (in all weather box in front)	Digital
20094E0101	20094	Aircraft Research Test	Analog
20094E0102	20094	Aircraft Research Test (NE vault)	Digital
20100E0101	20100	Gun Range	Analog
20125E0201	20125	West Vault (back room)	Analog
20125E0301	20125	West Vault (back room)	Analog
20127E0101	20127		Digital
20145E0101	20145	WL (Main SWGR-4) west side vault	Digital
20145E0201	20145	WL (Main SWGR-3) west side vault	Digital
20145E0301	20145	WL (Main SWGR-2) west side vault	Digital
20145E0401	20145	WL (Main SWGR-1) west side vault	Digital
20146E0101	20146	Aircraft Research Lab (2nd floor) RM 223	Analog
20146E0201	20146	Aircraft Research Lab (2nd floor)	Analog
20167E0102	20167	480V	Analog
20167E0103	20167	120/208V	Analog
20167E0104	20167		Digital
20189E0301	20189	Fly Wright	Analog
20190E0101	20190	Lab (on north side)	Analog
20191E0101	20191	Aircraft Research Test	Analog
20199E0101	20199	For Facility 20033 centrifuge	Digital
20233E0101	20233	Child Care Office	Analog
20248E0101	20248	SC Lab H/Engineering	Analog
20248E0202	20248	SC Lab H/Engineering PDC-1	Digital
20254E0101	20254	On transformer beside building	Digital
20306E0101	20306	CE Incinerator	Digital
20430E0101	20430	NCO Annex	Analog
20441E0101	20441	Bio Lab Rm 2-111 Electric Room on 2nd floor, Rm 111	Analog
20441E0201	20441	Bio Lab Rm 2-111 Electric Room on 2nd floor, Rm 111	Analog
20443E0101	20443	Sub C B1F	Digital
20443E0201	20443	Sub C B1G	Digital
20443E0301	20443	Sub C B1H	Digital
20443E0401	20443	Sub C B1J	Digital
20443E0501	20443	Sub C B1K	Digital
20443E0601	20443	Sub C B2G	Digital
20443E0701	20443	Sub C B2H	Digital

Meter ID	Bldg No.	Location	Meter Type
20443E0801	20443	Sub C B2J	Digital
20443E0901	20443	Sub C B2K	Digital
20443E1001	20443	Sub C B3J	Digital
20443E1101	20443	Sub C B4L	Digital
20443E1201	20443	Sub C B1A	Digital
20444E0101	20444	SW Station	Analog
20444E0102	20444	SW Station P1	Digital
20444E02010	20444	SW Station	Analog
20444E0202	20444	SW Station P15	Digital
20444E0301	20444	SW Station	Analog
20444E0302	20444	SW Station P10	Digital
20444E0401	20444	SW Station	Analog
20444E0402	20444	SW Station P16	Digital
20489E0101	20489	Museum SG	Analog
20489E0103	20489	Museum (in HV switch in back)	Digital
20489E0201	20489	Museum SG	Analog
20489E0301	20489	AC disp NW of Museum (right on fence)	Analog
20489E0501	20489	Aviation Hall of Fame (gear at AHOF)	Digital
20190E0101	20490	Panel A	Analog
20490E0201	20490	Panel B	Analog
20556E0101	20556	AMC 3	Digital
20557E0101	20557	AMC a PH#50186	Analog
20558E0101	20558	AMC 2 Panel MSB	Digital
20559E0101	20559	AMC 2 Panel MCC-BA	Digital
20559E0201	20559	AMC 2 Panel MSA (basement)	Digital
20560E0101	20560	AMC Complex	Digital
20620E0102	20620	6.9kV/480V Gear West Eng. Rm.	Digital
20620E0103	20620	12.4kV Gear East Eq RM	Digital
20620E0401	20620	H5 277/480V	Digital
20620E0501	20620	H6 120/208V	Digital
20620E0601	20620	H7 277/480V	Digital
20620E0701	20620	L1 120/208V	Digital
20620E0801	20620	L4 120/208V	Digital
20620E0901	20620	L5 120/208V	Digital
20620E1001	20620	L6 277/480V	Digital
20620E1101	20620	L7 120/208V	Digital
20620E1201	20620	L3	Digital
20620E1301	20620	H3	Digital
20620E1401	20620	H1	Digital
20620E1501	20620	L2	Digital
20620E1601	20620	H2	Digital
20620E1701	20620	H4	Digital
20622E0101	20622	Inside adjacent outside gear	Digital

Meter ID	Bldg No.	Location	Meter Type
20622E0201	20622	MCC Inside adjacent outside gear	Digital
20626E0101	20626	New Area B CE Fire House	Digital
20642E0101	20642	AFIT	Analog
20643E0101	20643	Contractor Ozanne Pole Mt meter	Analog
20643E0201	20643		Digital
20645E0101	20645	By Satellite Antenna	Digital
20651E0101	20651		Digital
20651E0301	20651		Digital
20651E0401	20651		Digital
20652E0102	20652		Digital
20652E0201	20652		Digital
20652E0301	20652		Digital
20653E0101	20653		Digital
20654E0101	20654	Outdoor Switchgear	Analog
20655E0101	20655	2nd Floor	Analog
20655E0201	20655	2nd Floor	Analog
20655E0301	20655	2nd Floor	Analog
20676E0102	20676	In CSMD (1st Floor Vault) mtr#67	Digital
20676E0202	20676	HSMD (first floor)mtr#66	Digital
20676E0302	20676	Second Floor	Digital
20676E0401	20676	Sub S	Digital
20682E0101	20682	Motion Picture Lab	Analog
20684E0101	20684	Gym	Analog
20745E0101	20745	Area B Roads and Grounds	Digital
20770E0102	20770	Heat Plant	Digital
20770E0201	20770	Across from plant on pole	Analog
20824E0101	20824	Medical Lab	Digital
20838E0102	20838	Monkey House	Analog
30001E0102	30001	SQ-D gear trainway vault	Digital
30001E0202	30001	FPE Sub #1 trainway vault	Digital
30001E0301	30001	Canteen Power Feed	Digital
30002E0102	30002	DEM	Digital
30010E0201	30010	88 Wing HQ Xfrmr pad in bac (in Xfrmr)	Digital
30011E0101	30011	@ fire Station (fac #30163) SWGR	Digital
30013E0101	30013	4950th	Analog
30013E0201	30013	4950th	Analog
30018E0101	30018	CE	Analog
30022E0101	30022	CE	Analog
30022E0201	30022	CE	Analog
30022E0301	30022	CE	Analog
30027E0101	30027	CE – 27, 28, 29	Digital
30030E0101	30030	Defense Contract Management Command Dayton	Analog
30054E0101	30054	906th	Analog

Meter ID	Bldg No.	Location	Meter Type
30060E0101	30060	Motor Pool	Digital
30060E0201	30060	Compressed Natural Gas Station east fence	Analog
30070E0101	30070	Transportation	Analog
30071E0101	30071	Back of 30174	Digital
30089E0101	30089	ILC end of bldg	Analog
30090E0102	30090	Tennis Barn	Digital
30091E0101	30091	Museum temp Storage	Analog
30093E0101	30093		Analog
30095E0101	30095	MWR Rec Rentals (emon Meter)	Digital
30095E0301	30095	MWR	Digital
30101E0101	30101	Camp Training Facility	Analog
30103E0101	30103	Avionics Elec Center	Analog
30103E0201	30103	Substation	Analog
30110E0101	30110	XP	Analog
30110E0201	30110	Across Street from 110 in HV Gear	Analog
30119E0101	30119	BX Gas Station inside bldg	Analog
30136E0101	30136	Hydro Facility	Analog
30140E0101	30140	Defense Colour Service Mech Rm – fenced area	Digital
30143E0101	30143	Air Freight Terminal	Analog
30145E0101	30145	BX Outdoor SG	Analog
30145E0102	30145	AGE Aircraft maintenance	Analog
30149E0101	30149	DE Light vault	Analog
30151E0101	30151	Fuels Barn	Analog
30153E0103	30153	Aero Club	Digital
30167E0101	30167	Power Station	Analog
30167E0201	30167	Power Station	Analog
30168E0101	30168	SP Operations	Analog
30169E0101	30169	SP Operations	Analog
30170E0101	30170	CE Steam Plant outside vault E	Analog
30170E0201	30170	CE Steam Plant outside vault S	Analog
30170E0301	30170	CE Steam Plant outside vault S	Analog
30174E0101	30174	Med Center	Analog
30174E0201	30174	Med Center	Analog
30206E0101	30206	Maintenance	Analog
30207E0102	30207	Defense Automated Addressing Svs in basement	Digital
30209E0102	30209	BX Shoppette Xfrmr in front	Digital
30210E0103	30210	ILC Lock Com	Digital
30219E0101	30219	Med Center	Analog
30238E0101	30238	MWR Golf Cart House (key=x5744 door=112/3287	Digital
30255E0101	30255	Lab Aircraft Research	Analog
30268E0101	30268	Museum Temp Storage (PH#71006)	Analog
30268E0201	30268	Skeel Street Lights	Analog
30268E0301	30268	Butt Construction	Analog

Meter ID	Bldg No.	Location	Meter Type
302884E0101	30884	PMEL	Analog
30890E0101	30890	645 ABW/EMX (by Twin Lakes in back, on pole)	Analog
30893E0101	30893	Twin Base Golf Course	Digital
31044E0101	31044	Library (in vault)	Analog
31212E0101	31212	Dorms 12 & 13 (xfrmer in courtyard)	Digital
31215E0101	31215	Dormitory (basement east mech. Rm.)	Digital
31215E0102	31215	Dormitory (parking lot)	Analog
31216E0102	31216	Dormitory Mech Room (west basement)	Digital
31217E0101	31217	NAOC Dorm	Digital
31221E0102	31221	Bowling Lanes (west vault)	Digital
31222E0102	31222	Rec. Center (basement east pen)	Digital
31224E0101	31224	Credit Union	Analog
31226E0102	31226	NCO Club (in vault)	Digital
31235E0101	31235	Child Care (pen at south end)	Analog
31238E0101	31238	New Four Seasons Store (in back by 444)	Analog
31239E0101	31239	Theatre	Digital
31240E0102	31240	CE Heat Plant SQ-D #1 Meter "D" in basement	Digital
31240E0102	31240	CE Heat Plant SQ-D #2 Meter "C" in basement	Digital
31240E0302	31240	CE Heat Plant FPE #1 Meter "A" in basement	Digital
31240E0402	31240	CE Heat Plant FPE #2 Meter "B" in basement	Digital
31245E0102	31245	Jarvis Gym	Digital
31250E0101	31250	BX (in vault behind commissary)	Analog
31250E0201	31250	Commissary (in vault behind commissary)	Analog
31250E0301	31250	Bank One (upstairs in Janitors closet) CAA	Analog
34019E0101	34019	Heat Plant	Analog
34023E0201	34023	NAIC Hangar	Analog
34039E0101	34039	Log Cabin	Analog
39010E0101	39010	Substation "J"	Digital
81014E0101	81014	Toltest Inc. by "A" water tower	Analog
81017E0101	81017	CTR (near water tower)	Analog
81018E0101	81018	Butt Construction (11403)	Analog
81019E0101	81019	Johnson Controls by "A" water tower	Analog
82011E0102	82011	Acq Mgt Ph2 Monarch Const. (Chapel)	Analog
82011E0201	82011	Acq Mgt Ph2 Monarch Const. (Chapel)	Digital
82011E0301	82011	Chapel Electric Trailer	Analog
82012E0101	82012	West Elec. RM Monarch Const (20620)	Analog
82019E0101	82019	Contractor – Ozanne	Analog
82024E0101	82024	Gun Range – Kokosing	Analog
82025E0101	82025	Contractor	Analog
83022E0101	83022	EPA (Fire Training Area)	Analog
83023E0101	83023	Midwest Titan New Four Seasons const.	Analog
83024E0101	34024	Monarch Const (Chapel Electric) west ramp across Vincent Ave from 34024 (west ramp)	Analog

Meter ID	Bldg No.	Location	Meter Type
83025E0101	30030	Butt Construction (DR Electric Behind 30030 adjacent to 30013 on Van Patton	Analog
31250W0101	31250	BX (in vault behind commissary)	Analog
31250W0201	31250	Commissary (in vault behind commissary)	Analog
19009E0101	10262	Bank One ATM in parking lot of 10262	Digital
		Housing Meters	
10279E0101	10279	Back Feed to Pine Estates	Digital
19012E0103	19012	Yount Drive Housing (near VOQ) in parking lot behind 10825	Digital
19013E0102	19013	Gate 8C Hospital Housing	Digital
19016E0101	19016	Bricks Housing Area (Duck Pond)	Digital
20446E0103	20446	Sub F Woodland Hills	Digital
29010E0102	29010	Prairies – Mob Home	Digital
29011E0203	29011	Prairies Housing at Fire House	Digital

J1.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 7**. New secondary meters shall be installed IAW Paragraph C.13, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3.3 and J1.6 below.

TABLE 7
New Secondary Meters
Electric Distribution System – Wright-Patterson AFB

Meter Location	Meter Description
The Installation has identified no new secondary meter requirements.	

J1.6 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following:

1. **Invoice** (IAW G.2): The Contractor's monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be submitted by the 25th of each month for the previous month. Invoices shall be submitted to:

   Name: 88 ABW/FMI
   Address: 1450 Littrell Rd
   WPAFB, OH 45433-5209
   Phone number: (937) 257-7497

2. **Outage Report**: The Contractor's monthly outage report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports

shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to:

Name:	88 ABW/CEMM
Address:	Littrell Rd, Bldg 22, Area C
	WPAFB, OH 45433-5209
Phone number:	(937) 904-2370

3. **Meter Reading Report**: The monthly meter reading report shall show the current and previous month readings for all secondary meters. The Contractor's monthly meter reading report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Meter reading reports shall be submitted by the 5th of each month for the previous month. Meter reading reports shall be submitted to:

Name:	88 ABW/FMI
Address:	1450 Littrell Rd
	WPAFB, OH 45433-5209
Phone number:	(937) 257-7497

4. **System Efficiency Report:** If required by Paragraph C.3, the Contractor shall submit a system efficiency report in a format proposed by the Contractor and accepted by the Contracting Officer. System efficiency reports shall be submitted by the 25th of each month for the previous month. System efficiency reports shall be submitted to:

Name:	88 ABW/CEMM
Address:	1450 Littrell Rd, Bldg 22, Area C
	WPAFB, OH 45433-5209
Phone number:	(937) 904-2370

J1.7 Energy Saving Projects

There are continuing Demand Side Management (DSM) initiatives for WPAFB. However, these projects should not materially affect that portion of the electric distribution system included in this package. There are also multiple Energy Saving Performance Contract (ESPC) efforts ongoing. These generally affect HVAC systems and interior lighting and should have no effect on this electrical distribution systems privatization.

J1.8 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the WPAFB boundaries, the boundaries of WPAFB GSUs, and easements/ROWs granted to the AF.

J1.9 Off-Installation Sites

All WPAFB GSUs (Huffman Radar Site and Kauffman Avenue Switching Station) are described in the preceding paragraphs and their components are separately identified in the inventory table.

J1.10 Specific Transition Requirements

IAW Paragraph C.13, Transition Plan, **Table 8** provides a listing of service connections and disconnections required upon transfer.

TABLE 8
Service Connections and Disconnections
Electric Distribution System – Wright-Patterson AFB

Location	Description
Housing Areas	As stated earlier, all housing area electric service laterals are excluded from this package and are included in the ongoing Housing Privatization (HP) initiative. Associated points of demarcation are described in the ROW documents. However, as the HP initiative evolves with demolition, new construction, etc., these points of demarcation could change.

J1.11 Government Recognized System Deficiencies

Generally, the electric system is in good condition. Several substations require significant work to maintain adequate levels of reliability. Substation B is very old (50+ years) and outdated. It should be reconfigured and replaced. The 69 kV circuit breakers at Substation H have failed repeatedly and should be replaced. A 69 kV main breaker should be added at Substation F. Much of the remaining overhead line is old and constructed with materials that are failing. These older lines should be replaced with an underground system.

Electrical projects that have some form of programming/planning action underway are listed in **Table 9;** the latest information on these projects will be available in the technical library. The Government recognizes these improvement projects as representing current deficiencies associated with the Wright-Patterson AFB electric distribution system. If the system is sold, the Government will not accomplish these planned improvements. The Contractor shall make a determination as to its actual need to accomplish and the timing of any and all such planned improvements. Capital upgrade projects shall be proposed through the Capital Upgrades and Renewal and Replacement Plan process and will be recovered through Schedule L-3. Renewal and Replacement projects will be recovered through Sub-CLIN AB.

TABLE 9
System Deficiencies
Electric Distribution System – Wright-Patterson AFB

Project Number	Project Description	Program Amount ($000)
980017	Install 69 kV circuit breaker in Substation F	$125

J1.12 Right of Access to the Utility System

Exhibit A—Map of Premises

Exhibit A map or maps from the Base Comprehensive Plan or other drawings show the known locations of the utility system and are available at the Base Civil Engineering Office. Portions of the utility system may not be fully shown on the map or maps. Any such failure to show the complete utility system on the map or maps shall not be interpreted as that part of the utility system being outside the Premises. The Premises are co-extensive with the entire linear extent of the utility system sold to Grantee, whether or not precisely shown on the map or maps.

Exhibit B – Description of Premises

B.1. General Description of the Utility System, Lateral Extent of the Right-of-Way, and Points of Demarcation:

Utility System Description:

The utility system may be composed of, without limitation, substations with outdoor switchgear, overhead and underground conductors, utility poles, ducts, raceways, manholes, pad-mount and pole-mount transformers, transformer pads, meters, and instrumentation related to metering of electricity delivered to end users on the Installation.

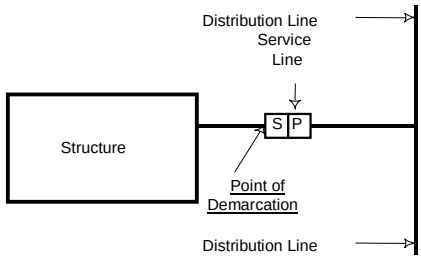
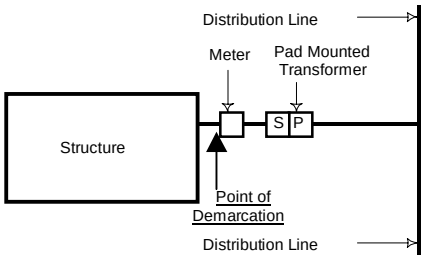
Lateral Extent of Utility System Right-Of-Way:

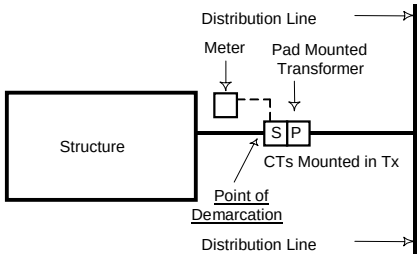
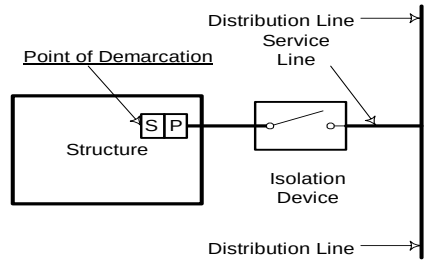
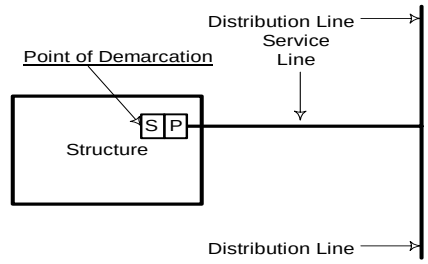
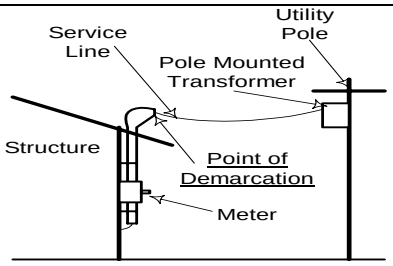
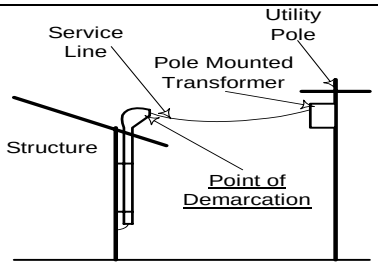
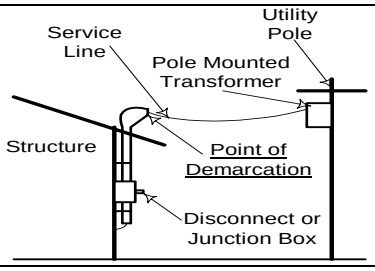
Where the utility system is installed above ground, 26-feet-wide, extending 13 feet on each side of the utility system, as installed.

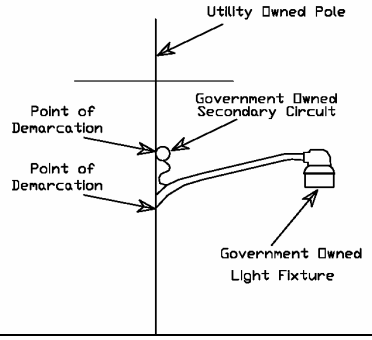
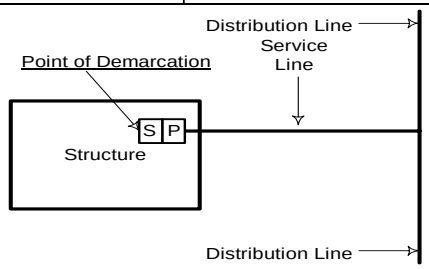
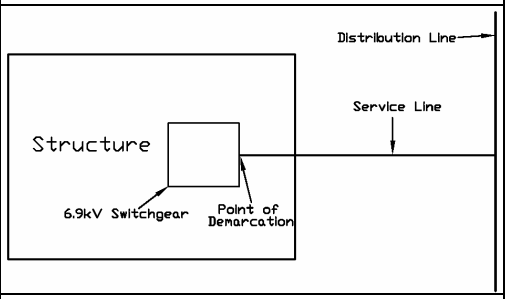
Where the utility system is installed on or under the ground, 26-feet-wide, extending 13 feet on each side of the utility system, as installed.

Utility System Points of Demarcation:

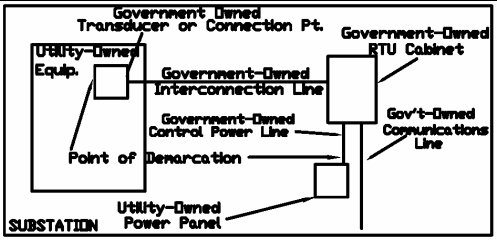
The point of demarcation is defined as the point on the utility system where ownership changes from the utility system owner to the facility owner. This point of demarcation will typically be at the point the utility enters a facility or the load side of a transformer within a facility. The table below identifies the type and general location of the point of demarcation with respect to the facility for each scenario.

Point of Demarcation (POD)	Applicable Scenario	Sketch
POD is the transformer secondary terminal spade.	Pad Mounted Transformer located outside of structure with underground service to the structure and no meter exists.	
POD is down current side of the meter.	Residential service (less than 200 amps and 240V 1-Phase), and three phase self contained meter installations. Electric meter exists on or within five feet of the exterior of the building on an underground secondary line.	

Point of Demarcation (POD)	Applicable Scenario	Sketch
POD is the transformer secondary terminal spade.	Three Phase CT metered service. Note: The meter, can, CTs, and associated wires are owned and maintained by the electric utility owner.	
POD is secondary terminal of the transformer inside of the structure.	Transformer located inside of structure and an isolation device is in place with or without a meter. Note: Utility owner must be granted 24-hour access to transformer room.	
POD is secondary terminal of the transformer inside of the structure.	Transformer located inside of structure with no isolation device in place. Note: Utility owner must be granted 24-hour access to transformer room.	
POD is where the overhead conductor is connected to the weatherhead.	Electric meter is connected to the exterior of the building on an overhead secondary line. Note: The meter and meter can, though beyond the POD, are owned and maintained by the utility owner.	
POD is where the overhead conductor is connected to the weatherhead.	Pole Mounted Transformer located outside of structure with secondary attached to outside of structure with no meter.	
POD is where the overhead conductor is connected to the weatherhead.	A disconnect switch or junction box is mounted to the exterior of the structure with no meter.	

Point of Demarcation (POD)	Applicable Scenario	Sketch
POD is the point where the secondary cable is attached to the utility-owned pole and the point where the light fixture is attached to the pole.	Government-owned secondary circuit and light fixture on the utility-owned pole.	
POD is secondary terminal of the transformer inside of the structure.	Transformer located inside of structure, with or without an isolation device or meter (transformer secondary is 6.9 kV). Note: Utility owner must be granted 24-hour access to the transformer room.	
POD is source-side terminal of the 6.9 kV switchgear inside of the structure.	6.9 kV switchgear located inside of the structure. Note: Utility owner must be granted 24-hour access to the transformer room.	
POD is at the overhead service line's connection to the service entrance mast. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD for the electric meter is at the water utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric utility owner's meter. The	Electric power is provided to a water facility via an overhead service drop. This configuration could be found at facilities dedicated to the water utility such as a water well, pump station, or water tower.	None

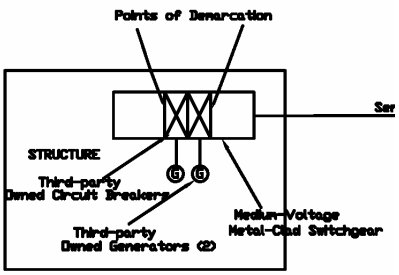
Point of Demarcation (POD)	Applicable Scenario	Sketch
water utility owner owns the service entrance mast.		
POD is at the transformer secondary terminal spade. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD for the meter is at the water utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric meters and transformers.	Electric power is provided to a water facility via an underground service connection. This configuration could be found at facilities dedicated to the water utility such as a water well, pump station, or water tower.	None
POD is at the overhead service line's connection to the service entrance mast. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD for the electric meter is at the wastewater utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric	Electric power is provided to a wastewater facility via an overhead service drop. This configuration could be found at facilities dedicated to the wastewater utility such as a lift station or wastewater treatment plant.	None

Point of Demarcation (POD)	Applicable Scenario	Sketch
utility owner's meter. The wastewater utility owner owns the service entrance mast.		
POD is at the transformer secondary terminal spade treatment plant. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD for the meter is at the wastewater utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric meters and transformers.	Electric power is provided to a wastewater facility via an underground service connection. This configuration could be found at facilities dedicated to the wastewater utility such as a lift station or wastewater treatment plant.	None
POD is SCADA system input point.	Government –Owned SCADA system connection at Utility-owned equipment (transformer, circuit breaker, meter, relay, CT, PT, etc).	

UNIQUE POINTS OF DEMARCATION:

The following table lists anomalous points of demarcation that do not fit any of the above scenarios.

Location	Point of Demarcation (POD) Description
Kaufmann Switching Station	Point of demarcation will be at the point where the incoming DP&L-owned transmission lines attach to the AF-owned substation structure.
Substation B	Point of demarcation will be at the source-side terminals of the first medium voltage equipment inside all structures supplied from Substation B circuits.

Location	Point of Demarcation (POD) Description
Substation C	The Government must be granted 24-hour access to jointly operate 15 kV circuit breakers inside the substation which supply structures containing Government-owned medium voltage equipment. Points of demarcation will be: A. At load side terminals of 69 kV circuit breaker B1A. B. At the secondary terminals of 69 kV power transformers B2B and B3B. C. At the source side terminals of 15 kV circuit breakers 1F, 3H, and 3K.
Substation E	The Government must be granted 24-hour access to jointly operate 69 kV circuit breaker B1A and 15 kV circuit breakers inside the substation which supply structures containing Government-owned medium voltage equipment. Point of demarcation will be at the source-side terminals of the first medium voltage equipment inside all structures supplied from Substation E circuits.
POD is medium-voltage switchgear bus inside of structure	Metal-clad circuit breakers (co-generation unit protection breakers) at HTHW Plant. Note: Utility owner must be granted 24-hour access to the switchgear. 

B.2. DESCRIPTION OF RESTRICTED ACCESS AREAS :

Description	Facility No.	State Coordinates	Other Information
Electrical Switching/ Sub Stations			Stations are secured by a locked, chain-link enclosure. Lateral access is provided outward around the perimeter of the chain-link enclosure for a distance of 13′ unless inhibited by adjacent structures.

Exhibit C—Environmental Baseline Survey

The Air Force has determined that it is not required to conduct an EBS in regard to the sale of this utility system.